CITY OF Fremont

Revised February 12, 2010

Project Address_____

Inspector_____

City of Fremont Residential PV Inspection Checklist

	Yes	No	FIRST INSPECTION - Roof, Flashing, and Mounting Progress Inspection
1			Approved Plans, Permits and Installation instructions for ALL components on-site and available (Required for ALL subsequent inspections)
2			Mounting System - Installed per plan ***(Progress inspection required before covering)***
3			Verify Flashing and Counter Flashing ***(Progress inspection required before covering)***
4			Clearance to roof edges per State Fire Marshall guidelines- as noted on plans

SECOND INSPECTION - Required if Modules are supplied with Junction Boxes that require Field Assembly (I.E. BP Solar) OR Combiner boxes or other Junction boxes that are to be located under the array modules.

	Yes	No	
1			All Combiners, junction boxes, and equipment Shall be opened and ready for inspection upon arrival
2			Combiner Box where three or more strings Listed/Factory assembled - DC rated 600v
3			Overcurrent Protection for Module strings 600Vdc - CEC 690.9 & 240
4			Conductor type and ampacity - Listed for wet locations and rated, 90° - CEC 690.31
5			Bonding of Rack Mounting System

	Yes	No	THIRD INSPECTION - FINAL INSPECTION
1			All Combiners, junction boxes, and equipment Shall be opened and ready for inspection upon arrival (not required if combiners and J-boxes under array and inspected)
2			Number and Type of modules matches plan
3			Labels on modules - Module Mfr and Model match plan, marked and listed - CEC 690.51 Means shall be provided to show label information on the modules.
4			Clearance from Plumbing Vents - Vent diameter x2 clear from bottom of modules
5			Bonding of modules are per Mfr's inst.instructions - CEC 690.43,45 250.134,136(A)
6			Equipment Grounding Conductor - Sized according to Table 250.122 - CEC 690.43
7			Verify DC Disconnect at Roof or inside nearest point of entrance - IF DC conductors are run through roof into structure - CEC 690.31, 690.14 (A-D)
8			Wire management - secured and protected - CEC 338.10 & 334 I,II
9			Electrical Line Diagram matches Plan
10			Verify Exisitng Grounding Electrode System - If no existing Grounding Electrode System in place PV installer shall a ground rod at the main electrical service and provide a GEC for service - CEC 250.52 (5)
11			PV System Grounding Electrode - Use either method allowed in CEC 690.47 C
12			Grounding Electrode Conductor - GEC sized in accordance with Table 250.66 CEC 690.47 C
13			Inverter type and model match plan - Installed per Mfr's Instructions
14			Verify plastic barrier is returned to its original position separating the AC/DC conductors from Comm.
15			Verify Utility point of connection (Backfed breaker) is per plan, NOT marked "Line/Load", same manufacturer as panel - Sized per plan
16			AC and DC Disconnects located within sight of Inverter - *CEC 690.14*

NOTE:Verification that the Exisiting Main Service Panel is Safe and free of Electrical hazards - If unsafe Owner may have to have a licensed electrician correct or replace equipment.

NOTE: Local policy requires separate AC and DC Disconnects allow for safe servicing or replacement of all equipment in PV System - AC Point of connection is suitable for AC disconnecting means if within sight of inverter. CEC 90.4, 690.14

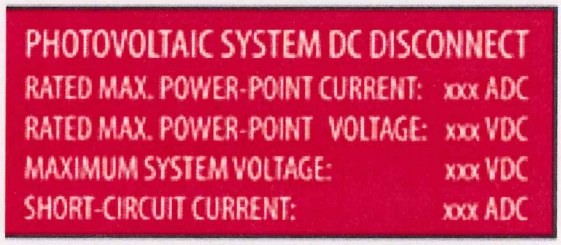
SIGNS AND LABELS

All Signs Shall be red background and white lettering. For outdoor installations they shall be engraved phenolic plastic type. Labels on raceways and other equipment shall be reflective, weather resistant, and suitable for the environment. If signs noted on plans differ from this sheet this sheet shall apply.

All Raceways and DC Combiner Boxes labeled ***"Caution: Solar Circuit"*** every 10' and changes in direction - Cal Fire/Fremont Muni Code

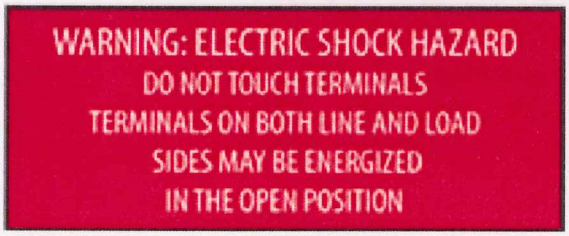
Ground Fault Warning Sign on Inverter - 690.5

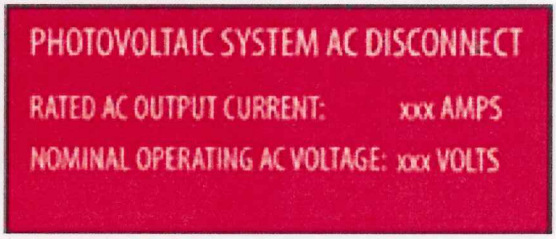
Field signs on DC Disconnect - CEC 690.53 OCPD



Main Service Panel and Inverter - Install a permanent Phenolic plaque at the service entrance equipment denoting all electrical power sources and their location on front of the service equipment. A plaque shall be located on the inverter with the location of the main service equipment if not within sight. **Size 3"x4"** - CEC 705.10

AC Disconnect - CEC 690.17 & 690.54





Required Inspections

A ladder is required for all inspections and shall extend 3' above edge and be secured at the top.

Provisions shall be made to verify the information located on the modules and equipment on rooftops. Inspectors will inspect rooftops from the ladder only. Since Inspectors are restricted from walking on roofs, provisions to show attachment, wiring, bonding/grounding, and module and equipment labeling and installation must be made. Digital Camera images may be used to satisfy this requirement and Inspectors WILL require Contractors to take photos during the course of the inspection.

1			For Structural Mounting System - A progress inspection **at aprox 75% completion** - Be prepared to show: Mounting System, Flashing, and Counter Flashing
2			When Modules are supplied with Junction Boxes or micro-inverters that require Field Assembly (I.E. BP Solar or Enphase) or Junction boxes that are to be located under the array modules a separate inspection of Module/Box Pre-Wiring is required before installing modules.
3			Final Inspection - 100% complete and all boxes, disconnects, and Components Shall be Open when Inspector Arrives. ALL required Signs and Labels Shall be installed per plan.

Note: Failure to comply with the above inspection requirements May result in re-inspection fees.